

**WHAT IS CLAIMED IS:**

1. A door lock, comprising:
  - 5 a housing having two plates to be mounted on opposite sides of a door respectively and a position base at between the plates;
  - 10 a driving mechanism having two handles pivoted on the plates respectively for swing, two pawls provided on the handles respectively having ends thereof extended inwards at between the plates and two arms received in the housing and pivoted thereon to be driven by the pawls respectively, and
  - 15 a driven mechanism having gears provided on the position base to be driven for rotation by the arms and a sliding block driven by the gears for reciprocation along a predetermined orientation;
- wherein the gears have a first gear, a second gear and a third gear;
- wherein the first gear is pivoted on the position base at between the position base and one of the plates and has two first flank portions, corresponding to one of the pawls;
- wherein the second gear is pivoted on the position base and has two second flank portions corresponding to the other one of the pawls;

wherein the third gear is pivoted on the position base and meshed with the first gear and the second gear having a crank at a middle section thereof to move the sliding block for reciprocation.

5        2. The door lock as defined in claim 1, wherein the second gear has a body portion and a shaft, wherein the body portion is meshed with the third gear and the shaft has and an end thereof inserted into a through hole of the body portion and has the second flank portions at the other end thereof and further wherein the second gear has means for securing the shaft in the through hole of the body portion.

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3. A door lock, comprising:

a housing having two plates to be mounted on opposite sides of a door respectively and a position base at between the plates;

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a driving mechanism having two handles pivoted on the plates respectively for swing, two pawls provided on the handles respectively and having ends thereof extended inwards at between the plates and two arms received in the housing and pivoted thereon to be driven by the pawls respectively;

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a driven mechanism having gears provided on the position base to be driven for rotation by the arms and a sliding block is driven by the gears for reciprocation along a predetermined orientation, and

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a locking mechanism having a button provided on the position base for

reciprocation between a first position and a second position and a pressing plate having a middle section pivoted on the position and having a top end corresponding to the button and a bottom end corresponding to the gears, wherein while the button is moved to the first position, the gears are in a condition of adapted to be driven by the pawl for

- 5 moving the sliding block, and wherein the button is moved to the second position, the pressing plate moves the gears away from the pawl, so that the gears will not be driven by the pawl.

4. The door lock as defined in claim 3, wherein the position is provided with  
10 a locking slot and the button has a tenon to be inserted into the locking slot while the button is moved to the second position and to be moved out of the locking slot while the button is moved to the first position.

5. The door lock as defined in claim 4, wherein the position base is provided  
15 with a core at a predetermined position and the core has an end thereof extended out of the plate and has the other end thereof extended to a position adjacent to the tenon to stop the tenon escaping from the locking slot.

6. The door lock as defined in claim 4, wherein the locking slot is above the  
20 sliding block and the sliding block has a pushing portion at where corresponds to the button, whereby the pushing portion can move the tenon out of the locking slot while the sliding block is moved to a predetermined position.

7. The door lock as defined in claim 6, wherein the sliding block has two  
25 pushing portions and a recess between the pushing portions, wherein the tenon is rested

in the recess while the sliding block is moved to a middle position and the tenon is moved by one of the pushing portions to release the button from the second position thereof while the sliding block is moved away from the middle position.